

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
4 August 2005 (04.08.2005)

PCT

(10) International Publication Number
WO 2005/069959 A3

(51) International Patent Classification:
H01L 41/08 (2006.01) *H01L 41/113* (2006.01)

(21) International Application Number:
PCT/US2005/001974

(22) International Filing Date: 21 January 2005 (21.01.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/537,821 21 January 2004 (21.01.2004) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 60/537,821 (CON)
Filed on 21 January 2004 (21.01.2004)

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US (patent), UZ, VC, VN, YU, ZA, ZM, ZW.

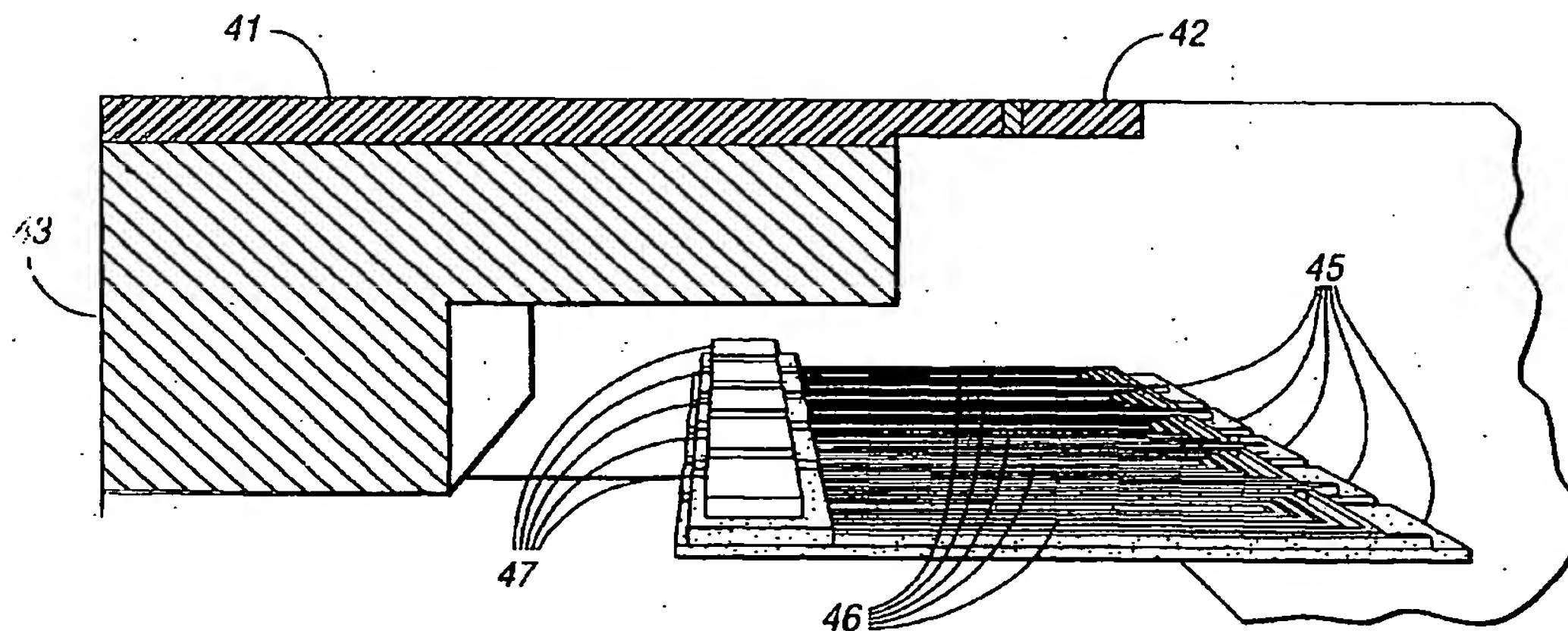
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

[Continued on next page]

(54) Title: METHOD AND MICRO POWER GENERATOR FOR GENERATING ELECTRICAL POWER FROM LOW FREQUENCY VIBRATIONAL ENERGY



(57) Abstract: A method and a micro power generator for generating electrical power from low frequency, vibrational energy includes a frequency up-conversion process. The generator is preferably an electromagnetic, vibration-to-electrical power generator which can efficiently scavenge energy from low frequency external vibrations. The generator (41) up-converts low frequency environmental vibrations to a much higher frequency through a mechanical frequency up-converter (44), and hence provides efficient energy conversion even at low frequencies. This mechanical frequency up-conversion process can be realized in a number of ways. A magnetic method is described as an example. After frequency up-conversion, voltage is induced on coils (46) mounted on resonators (44) by electromagnetic induction. Due to the movement of the coils on their respective resonating cantilevers (45) with respect to the magnet (43), voltage is generated on the coils and energy conversion is realized.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/01974

A. CLASSIFICATION OF SUBJECT MATTER
IPC: H01L 41/08(2006.01),41/113(2006.01)

USPC: 310/339
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 310/339

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2003/041181 A3 (ALBSMEIER) 15 May 2003 (15.5.2003) whole document	1-21
Y,P	US 2004/0135554A1 (CLINGMAN) 15 July 2004 (15.07.2004), whole document	1-21
X	US 2003/0197448 A1 (TANIELIAN) 23 October 2003 (23.10.2003), whole document	1-21

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☐ See patent family annex.

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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
17 February 2006 (17.02.2006)

Date of mailing of the international search report

28 MAR 2006

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